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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/100,799	06/19/1998	HIROAKI KUBO	05058/71301	8949

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DALLAS, TX 75201

EXAMINER

VILLECCO, JOHN M

ART UNIT	PAPER NUMBER
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2612

19

DATE MAILED: 12/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

TS

Office Action Summary

Application No.

09/100,799

Applicant(s)

KUBO, HIROAKI

Examiner

John M. Villecco

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-38 is/are allowed.
- 6) ☒ Claim(s) 10-15 and 39-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION IV

Response to Arguments

1. Applicant's arguments with respect to claims 10 and 39 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 10 and 39 are rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki (U.S. Patent No. 6,466,263).**

4. Regarding *claim 10*, Suzuki discloses an image pickup device including a CCD (2), a memory card (10) for recording the image data, a display unit (17), and an interpolating portion inherently consisting of the digital processor (11) and the system controller (19). Based on whether the camera is in a recording data mode or a reproducing mode, an interpolation procedure is carried out. In the case of the recording mode, an ordinary interpolation mode is carried out. In the reproducing mode, an inverse interpolation procedure is carried out. Inherently, the camera would include a changer for indicating whether the camera is in capturing

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mode or a reproducing mode. The changer would inherently be included in the operation unit

(18). See Figures 2 and 3, and column 5, lines 1-65.

5. **Claim 39** is considered a method claim corresponding to claim 10. Please see the discussion of claim 10 above.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 11 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (U.S. Patent No. 6,466,263).**

8. Regarding **claim 11**, as mentioned above in the discussion of claim 10, Suzuki discloses all of the limitations of the parent claim. However, Suzuki fails to explicitly state that the interpolation performed for displaying is faster than for the interpolation performed for recording. Suzuki, on the other hand, does teach that in the inverse interpolation procedure a decimation process is carried out (col. 5, lines 63-66). Obviously, this decimation process would be performed faster than the calculations performed for the interpolation process. Furthermore, it would have been obvious to one of ordinary skill in the art to perform the reproduction faster than the recording so that the user may view the images being reproduced more quickly. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention

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was made to perform the inverse interpolation of the reproduction process, more quickly than the recording process.

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (U.S. Patent No. 6,466,263) in view of Hayashi (U.S. Patent No. 5,734,427).

10. Regarding *claim 15*, as mentioned above in the discussion of claim 10, Suzuki discloses all of the limitations of the parent claim. However, Suzuki fails to explicitly state that interpolation is performed for each of the colors of the image data. Hayashi, on the other hand, discloses an interpolation portion corresponding to each color in the image. Hayashi includes multipliers 213, 214, 216, 382, 384, and 386 for interpolating each of the red, blue and green components of the image. Clearly, this is a well known way of performing interpolation in an image sensor. By performing this type of interpolation, image data for each of the colors can be found for each of the locations, thereby forming a higher resolution color image. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to interpolate for each of the colors of the image data.

11. Claims 12-14 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (U.S. Patent No. 6,466,263) in view of Haruki (U.S. Patent No. 5,990,949).

12. Regarding *claim 12*, as mentioned above in the discussion of claim 10, Suzuki discloses all of the limitations of the parent claim. However, Suzuki fails to specifically disclose a gamma correction section for correction a gradation characteristic between recording and displaying. Haruki, on the other hand, discloses that different gamma corrections are carried out for images

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that are to be displayed on an LCD (36) than image signals that are not. The second gamma correction circuit (24) outputs a different gamma correction for an image to be displayed on an LCD while the first gamma corrected image is sent to the flash memory (28). The ability to apply various gamma corrections to an image depending upon where the image is to be sent allows for a better image on the display device. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a gamma correction characteristic depending upon whether the image is to be recorded or displayed.

13. As for *claim 13*, Haruki discloses that a different gradation characteristic is given to an image signal that is to be sent to an LCD (36) than to an image signal that is to be sent to the flash memory (28).

14. Regarding *claim 14*, Haruki discloses an LCD (36) on the camera for displaying the image.

15. *Claim 41* is considered a method claim corresponding to claim 12. Please see the discussion of claim 12 above.

Allowable Subject Matter

16. **Claims 16-38 are allowed.**

17. Regarding *claim 16*, the primary reason for indication of allowable subject matter is that the prior art does not teach nor reasonably suggest an imaging device that corrects for both a frequency characteristic and a gradation characteristic according to the image recording mode.

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18. As for *claim 33 and 37*, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest executing an interpolation process based on a selected compression rate.

Conclusion

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any response to this final action should be mailed to:

Box AF
Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

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(703) 308-6306, (for formal communications; please mark "**EXPEDITED PROCEDURE**"; for informal or draft communications, please label "**PROPOSED**" or "**DRAFT**")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. Villecco whose telephone number is (703) 305-1460. The examiner can normally be reached on Monday through Thursday from 7:00 am to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber, can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service desk whose telephone number is (703) 306-0377.

JMV

11/25/03


WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
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